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ORIGINAL DEPARTMENT.

LECTURE.

V. PULMONARY PHTHISIS.

Delivered at the Philadelphia Hospital, December 17th, 1879.

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REPORTED BY WM. H. MORRISON, M.D.

GENTLEMEN—I think it will save time, if, instead of considering further the course and symptoms of phthisis, I to-day ask your attention to the treatment of those symptoms we considered at my last lecture. I will, therefore, for a moment return to and take up the treatment of the fever in chronic catarrhal phthisis. You will remember that I spoke of its irregular course, differing in different individuals; being in some very marked, while in others it was very slight. This does not appear to depend upon the amount of local disease, since in some systems a comparatively small amount of local disease will be attended with a high degree of fever, while in others a much more extensive local disease will be accompanied by a very slight elevation of temperature and increase in the pulse rate. Undoubtedly, an explanation of a part of this great difference is found in the fact that different individuals get fever with different degrees of ease, owing to some difference in the nervous organization of the individual; but in addition to this, there is reason to fear that in cases attended by much fever there is danger of the absorption into the system of some irritating or septic matter, so that this fever is, to a certain extent, of a septic or zymotic character. As a rule, in those

who present a considerable degree of fever in proportion to the local lung trouble, we are to dread the development of tubercle. Thus, it is an unfavorable prognostic sign.

I further told you that, in any given individual, the fever, from time to time, presented remarkable fluctuations. The true nature of these exacerbations is frequently overlooked. The patient is said to have a bilious attack, a little chills and fever; almost every other explanation than the true one, which is, that it is due to a fresh attack of pulmonary catarrh; and examination will show that with each attack there has been a distinct extension of the area of catarrhal irritation and an increase of the inflammation. Therefore, when a patient with catarrhal phthisis gets increased fever, no matter what the other symptoms may be, whether associated with disturbance of the stomach, loss of appetite, diarrhoea, or not, I advise you to suspect the existence of a fresh attack of catarrhal inflammation, and treat it accordingly. In such patients there is a most intense susceptibility to the action of damp, cold, and other disturbing influences, so that a catarrhal attack is set on foot by an amount of exposure and with an ease that seem scarcely possible.

The treatment, then, of this febrile action is a matter of the greatest importance. In the first place, let us recognize that it is distinctly connected with the irritation of the local disease, and that when it is very high in proportion to the local disease there is reason to fear that infection of the blood and system is going on. We must also bear in mind that there is nothing in the condition of a patient with catarrhal phthisis which would prevent him from suffering from malaria. Indeed, such a person would be very

liable to be attacked by malarial fever, if exposed to its cause; and on the other hand, there are no people who are more likely to get catarrhal phthisis than those who have had their blood impoverished and their systems broken down by the malarial poison. In such persons an attack of catarrhal pneumonia is very apt to pass into a catarrhal phthisis. Therefore, where the fever is of a high grade and obstinate, it is well to consider the question of the possibility of the co-existence of malaria.

Now, what are the principles that should guide our treatment? I think we ought, as a rule, to try to get rid of this fever, even if it is only moderately severe; for certainly those patients who have the least fever do much better and live longer than those who have more marked fever.

The first thing we should do is to recognize the cause. Suppose we find a malarial element; this should be removed by full doses of quinia, and the patient kept upon the continued use of quinia and arsenic. I mention arsenic particularly, because you will find, in cases of obstinate hectic fever, arsenic a very valuable remedy; but to produce a good effect it must, in the first place, be well borne by the stomach, and generally the mucous membranes of patients with phthisis are very irritable, so that arsenic must be given with the greatest care; and secondly, if it is well borne, its use must be kept up for a long time. Under such conditions it is a very useful remedy. If, however, there is no trace of malarial complication to be found, but if the hectic fever assumes a distinct intermittent character, presenting, as I have said it sometimes does, a rigor, followed by high fever and marked sweating, so that it simulates an ordinary intermittent malarial fever, quinia is always to be given in large doses, and will nearly always modify the hectic fever, but will not stop it, as would be the case if a malarial element was present. To accomplish this full doses are required.

More frequently, however, we have a grade of hectic much less marked than this, one in which the morning temperature is not over 100° , and the evening 101° or 101.5° . Of course, this fever cannot be broken as long as active irritation is going on in the lung. We must, therefore, not expect such brilliant results from our remedies as we would in an idiopathic fever, and besides treating the febrile action, we must also address our remedies to the local catarrhal disease of the lung, by which the fever is kept up.

... In these cases quinia is useful, but should not be given in such large doses as we would where a malarial element existed, that is, twelve or

fifteen grains, but in doses of one or two grains, three times a day. As to the mode of giving this, I would be guided by the state of the circulation. If, at the same time, the pulse was rapid and weak, I should associate digitalis with the quinia. If, on the other hand, there was a marked tendency to night sweats and relaxation of the system, the fever not of high grade, and the pulse not rapid, I should use aromatic sulphuric acid with the quinia, and give them in solution. Nearly always, in these cases of fever, you will find a little opium an important addition to the quinia; for instance, there is no better combination where there is marked irritation, with fever of high grade, with rapid, weak pulse, than a pill of quinia, digitalis and opium; but you are to observe that this pill is to be used only occasionally, so that the patient will not be led into the habit of taking opium every day. I think there can be no doubt but that the habitual use of opium, except in exceedingly trifling amount, exerts a depressing effect upon nutrition. Of course, it would not injure the patient to take one-eighth or one-sixth of a grain of opium, but to take as much as one-grain doses for a long time, I think is injurious; but, bad as opium is, there are things that are worse; for instance, a high degree of nervous irritation and hectic fever; so that, where we cannot dispense with opium, we must use it carefully. In such cases we may give one grain of quinia with one-fourth, one-third, or one-half a grain of powdered digitalis, and one-eighth, one-sixth, or even one-half a grain of powdered opium, three times a day, according to the indications of the case. Where there is a marked tendency to relaxation of the skin and to night sweats, one grain of quinia with ten drops of aromatic sulphuric acid and minute doses of morphia, may be given in solution, three times a day. I have already alluded to the use of arsenic where the hectic fever is obstinate, and a pill containing quinia, digitalis, opium and arsenious acid is often followed by an admirable result, if its use is kept up for a long time.

Lastly, you will often find that the hectic fever is kept up or increased by irritation of other mucous membranes, as the gastro-intestinal. Frequently after the catarrhal condition of the lung has been much relieved, the hectic fever will remain obstinate, and on a careful examination of the patient it will be found to depend upon a continuance of a catarrhal state of the gastro-intestinal mucous membrane, accompanied by a coated tongue, capricious appetite, impaired digestion, and other evidences of irritation of the digestive tract. Where such a con-

dition exists, we may be sure that any febrile action occurring at that time will be aggravated. In these cases, if we suspend all remedies directed to the lung, and treat with dietetic and regional measures and remedies, addressed to the digestive canal, we will obtain more relief for the patient than we did while treating the fever as a symptom of the lung trouble. All through the treatment of phthisis there is no principle so necessary as paying scrupulous attention to the digestive apparatus, not only because its irritation will increase the fever, but where a cure is effected, it is only brought about by a maintenance of the nutrition.

Let me now call attention to this patient, who was before us last week, and who illustrates in a marked degree the acute exacerbations of fever. He has a catarrhal phthisis of the upper right lobe, which, on the whole, has been slowly improving. At present, if you were to examine it, you would be surprised to find very few râles present. The respiration is somewhat feeble, and the expiration prolonged, but there are scarcely any râles. Now, with every change in the weather, or on some trifling exposure, so slight that, as yet, I have been unable to protect him from them, he will have a little creep, begin to feel dull, indisposed, and weak, and go to bed. His temperature, which may have been in the morning 99° , in the evening $99\frac{1}{2}^{\circ}$, will run up to 100.5° . The temperature has never been above 101° . Râles will be heard all over the lungs, coarse, sub-crepitant, passing into moist, mucous râles. After this condition has lasted for twenty-four, thirty-six, or seventy-two hours, he will begin to feel better, and will feel as well as usual until he has another attack of pulmonary catarrh.

Fortunately, in this man the catarrhal matter seems to have very little tendency to pass into a state of cheesy degeneration, and very little tendency to develop tubercles. In the course of the last four months I think he has had at least twenty of these attacks. As each of these passes away it leaves the lung in a little better condition than it was at the previous attack; so that, on the whole, there has been an upward tendency. This man has for a long time lived in this district, near the banks of the river, where he has been exposed to malaria. I suspect that he has, in connection with his lung trouble, a malarial taint. During the attacks he has been put to bed and treated actively, as I shall hereafter describe to you. He has also been put upon the continued use of quinia and arsenic, and I think that since he has been upon this treat-

ment he has shown a decidedly less tendency to have these acute attacks.

At the last lecture I spoke of the occurrence of profuse night sweats. In the young man I had before me then, and who on entering had a sub acute catarrhal pneumonia of the right apex, which passed pretty rapidly into softening, leaving a circumscribed cavity under the right clavicle, with a little solidification of the surrounding tissue, there was from the very first a degree of febrile action and profuseness of night sweats out of all proportion to the amount of local disease. He was treated by absolute confinement to bed, active counter-irritation over the affected spot, and full doses of quinia and chloride of ammonium. The congestion around the diseased spot began to clear up, no extension of the trouble occurred, and the general symptoms began to improve, but while the febrile temperature diminished, so that the evening temperature was not over 101° , he had drenching sweats every night.

Let us then consider this symptom of night sweats. Here, again, we find an individual element in the matter. Some, with comparatively little lung disease, and only a moderate elevation of evening temperature, will have copious night sweats, while others, with a considerable amount of lung trouble, and a high degree of fever, will have little or no night sweats. It is only when these sweats are extremely profuse that they are to be regarded as a bad sign. When they are only about as much as we would expect to have in order to carry off the febrile action, they are not unfavorable. It is better for a patient to have a fever which terminates in sweating, than to have a fever with a temperature of 103° going down to 101° , and the skin not becoming entirely relaxed and cool. Of course, the latter patient will be consumed much faster than the one in whom the fever is followed by sweating. In other words, the one has an intermittent, and the other a remittent fever, and the latter is much the worse. A moderate amount of night sweats is not, then, a bad sign.

Again, we are to remember that this is entirely secondary to the local disease of the lung and the febrile action; it is to be treated by treating the local condition and the condition of the other mucous membranes. It is only when it becomes a source of exhaustion that it demands a separate treatment. The remedies that do most good are those that increase the tone of the skin and act powerfully upon its blood-vessels.

Frequently you will find that the removal of the patient to a cool and bracing climate will

greatly lessen the night sweats. Sometimes they may be checked by a change of diet; a change to one consisting of light and easily digested food containing a large amount of liquid, which acts as a diuretic. Another useful measure is cool bathing, or cool sponge bathing with water containing salt or alcohol. This is a remedy that is too much neglected. It may be used much more frequently than is generally supposed, but the baths must be taken with care, going over the surface rapidly with the sponge, and immediately drying by friction with a towel. The temperature of the water must be regulated by the temperature of the body, never being so low as to cause chilling of the patient. This bathing is a most important element in strengthening the system and fortifying it against the repeated attacks of fever.

The drugs that are used to increase the tone of the skin are astringents, tannic and gallic acids, the mineral astringents, acetate of lead, sulphate of copper, oxide and sulphate of zinc. Frequently, you will find that while these remedies do good in one case, in another they will fail. Among the drugs that influence the state of the vessels, quinia and atropia may be mentioned as the two most potent. The quinia may be given in combination with any of the astringents I have mentioned, and is very useful where there is a moderate degree of fever with night sweats. Where the sweating is more profuse, you will find that atropia given at bedtime is a powerful remedy. It may be given in solution, in doses of one-hundredth to one-sixtieth of a grain, according to the susceptibility of the patient. This will produce a dryness of the skin, which will often enable the patient to pass through the night without his customary sweat; but I do not think that atropia is to be regarded as an adequate treatment for night sweats, since they depend not only upon the relaxation of skin, but are also due to the local trouble. I think it is well to keep up the continuous use of such remedies as the combination of quinia and tannic acid, or quinia with other astringents, while we reserve atropia for use at nights.

Sometimes the night sweats are checked by the external use of hot water containing alum or alcohol, which has a stimulating effect upon the skin, and thus tides the patient over his ordinary time for having the sweat.

In the patient I had before you at the last lecture I tried probably half a dozen of these remedies, without stopping the night sweats. Atropia had no effect. I then gave him a remedy whose use has lately been revived for the treatment of

this condition, and one which I think is of little value, that is, agaric. I gave it to him in large doses, but it produced no effect. Finally, he began to improve under the use of quinia and tannic acid, but I attribute the cessation of the night sweats more to the subsidence of the local lung trouble than to the quinia and tannic acid, for as the lung became better the nutrition improved and the night sweats became less marked.

Another symptom to which I alluded when we last met, and to which I again desire to call attention, is hemorrhage from the lung, and its significance. It presents itself under different conditions in these diseases. In the first place, sometimes a person who is apparently perfectly healthy, who has had no cough, will have spitting of blood, and after this evidence of lung disease shows itself. Secondly, sometimes at the very onset lung disease will be attended by marked hæmoptysis. Thirdly, during the course of chronic catarrhal phthisis the fresh attacks of increased catarrhal irritation and congestion are often associated with spitting of blood. Fourthly, where destructive disease of the lung, with the formation of a cavity, has occurred, some of the vessels may be opened and give rise to profuse hemorrhage.

We are to consider hæmoptysis under these four heads: First, as to its significance when occurring without any previous signs of lung disease in those who are in apparent health. We have here a patient who well illustrates this condition. He has a catarrhal phthisis of the upper portion of the left lung, and a cavity in the upper lobe, with some scattered centres of solidification and cheesy softening in its neighborhood. His history is, that seven years ago, while sitting upon the steps in front of his house, he suddenly had a profuse hemorrhage. The amount of blood is often exaggerated by the patient. It is usually about three or four ounces. At that time he had no cough or fever, and for two years he continued well; he then began to have catarrhal disease, which has gone through the very chronic course of catarrhal phthisis.

It has been customary to say that such a hemorrhage is an indication of the deposit of tubercle, but this is not the case in the majority of instances. I have already told you that the growth of a tubercle is a process of obliteration of vessels. We may safely say that hæmoptysis, whatever else it means, is not a common sign of the formation of tubercles. Now, where we have a hemorrhage, as in this case, coming on in a healthy person, with no fever, no cough, and no

evidence of lung trouble, we can hardly think it possible that such a hemorrhage has come from the air cells. I have no doubt but that this came from the large tubes, that it was all expectorated, and that it was not connected with any disease of the lung tissue proper.

Again, you will sometimes find that after a hemorrhage the patient, instead of getting perfectly well, presents a little cough and other lung symptoms, which afterward turn out to be those of catarrhal disease. Now, there are two explanations of these cases. Either the patient had an acute congestion of the lung and a certain amount of catarrhal pneumonia; and the hemorrhage was due to congestion of the lung, or else the blood that was effused was not all expectorated, but some was drawn into the vesicles by the gasping efforts during the hemorrhage and there coagulated, and remained as an inert dead body, subject to decomposition. This excited irritation and caused the local catarrhal process. It is exceedingly difficult, in some cases, to say what has been the exact order. In reading, you will find that some authorities are disposed to take the first view, and others the second view; but certainly both of these may occur. My own opinion is that in the majority of cases where hemorrhage is followed by evidences of irritation of the lung, catarrhal pneumonia, catarrhal phthisis, there has been at the time of the hemorrhage a congestion, or a catarrhal pneumonia of the lung, and only in comparatively rare cases does the blood set up any catarrhal disease of the lung. I have seen so many cases of hemorrhage from the lung in heart disease, and no pulmonary trouble follow, that I am sure that in many instances hæmoptysis does not set on foot catarrhal pneumonia. From what I have said, you will see that hemorrhage from the lung is not to be regarded, necessarily, as a symptom of phthisis; but undoubtedly, the fact that a patient has had hæmoptysis is an evidence of weakness of tissue, an evidence of want of tone of the vessel wall, and therefore indicates that probably the vital processes of that lung are not of a high grade, and would not tend to a rapid restoration to health if that lung became diseased. Such hemorrhage is therefore an unfavorable sign.

Frequently, during the course of chronic catarrhal phthisis, hemorrhage occurs, and this usually marks the occurrence of fresh attacks of catarrhal pneumonia or congestion. Nearly always after the hemorrhage has passed away the physical signs will show that there has been some extension of the disease around the affected spot. The blood comes far more from the sur-

rounding healthy tissue than it does from the diseased part. One of the most serious troubles in this disease is that the blood vessels in the affected part become obstructed, the nutrition is impaired, and this leads to a rapid degeneration of the diseased part.

The hemorrhage that occurs in either of these three ways is not usually dangerous, and does not seriously weaken the patient. When a patient has had a chill, followed by congestion of the lung, which must relieve itself in some way, it is better that hemorrhage should occur and be expectorated, than that the congestion should relieve itself by an effusion into the air vesicles. What we are to dread is not the amount of blood lost, but the fact that it is usually an indication that a fresh portion of the lung has been involved in the destructive process.

Lastly, after the disease has lasted some time, and there has been destruction of the lung tissue, with the formation of a cavity, a frightful hemorrhage may occur, and the patient may be smothered in a few moments. Examination has shown that the blood vessels ramifying in the walls of a cavity are apt to form small aneurisms projecting toward the cavity. These are attended with thinning of the blood vessel wall and liability to rupture, causing severe hemorrhage. Again, this hemorrhage may be produced by the ulceration involving and cutting the walls of a blood vessel.

Our treatment of hæmoptysis will depend upon what we determine to be the source of the hemorrhage. If we had a patient like this last one, in whom it occurred without any symptom of lung trouble, and on examination with the laryngoscope we find no ulceration of the trachea, for sometimes by this means we are able to detect the exact seat of the hemorrhage, I say, if we find no physical signs of disease of the lung and no ulceration, we must locate the seat of hemorrhage in the large bronchial tubes, and a great many of these hemorrhages are due to congestion of these tubes, or to minute ulcers on their walls.

I must postpone the further consideration of the treatment of hæmoptysis until we again meet.

Signs of Death

We learn from the *British Medical Journal* that M. Beyraud, of Libourne, in a communication to the Academy of Sciences in Paris, writes that real death may be recognized in a practical manner by means of the application of the cauterity to the supposed corpse. If the eschar do not show itself, the subject is dead; if it be yellow and transparent, the subject is dead; if it be black or of a reddish-brown, the subject is living.

COMMUNICATIONS.

HOW TO MAKE A CHEAP GALVANIC BATTERY.


BY WM. R. D. BLACKWOOD, M.D.,
Of Philadelphia.

Two years ago, in a continued paper illustrating the advantages of electricity in the cure of disease, a promise was made to give at some future time directions for making a galvanic battery at a low cost, and since then I have received letters from almost every State and Territory, asking me to write the promised article, but time has been wanting in which to do it: and now I must claim indulgence, as this article is written at odd moments, which, as every author knows, is a bad way to do such work.

The idea is commonly held that a battery, to be good, must be purchased at a high cost, and is necessarily of superior finish; but the notion is erroneous. None of my batteries—and I have seven, from as many different makers—give me better results, or are more easily kept in order than that which I made myself. Another mistake is, that galvanic cells must be necessarily large, such as are found in telegraph offices, or cabinet batteries; but no better work is obtained through such cells than by means of the small and compact cells of portable batteries, which are now widely used, but which are with difficulty maintained in good condition, owing to their complexity. The battery now to be described is not portable, so far as carrying in a carriage is concerned, but it can be taken from place to place, by handles attached to the box, if carefully managed; and as nearly all electrical treatment is made in the physician's office, portability is not essential.

Without further preliminary remarks let us commence our task. We require 100 one-ounce quinine bottles; 100 pieces of stout glass tubing, three-fourths of an inch in diameter and 5½ inches long; 100 pieces of sheet copper, 2 inches wide by 4 inches long; 100 pieces of sheet zinc, 2 inches wide by 4 inches long; 300 patent gun-wads, accurately fitting the glass tubing; 100 feet of soft copper wire, No. 18; 100 McGill's round-headed paper fasteners, No. 3; a box to contain the battery, in which the cells fit snugly enough without movement laterally, but from which they can be lifted vertically, one at a time, for examination or repair. Handles of any kind may be attached to the box.

The above eight articles are readily obtainable—the quinine bottles from any druggist; the tubing from druggists, or dealers in glass ware; the

copper from dealers in metal; the zinc from stove merchants (but rod zinc, when obtainable, is better, for durability); the gun-wads from hardware stores, or dealers in powder and shot; the copper wire and tacks at hardware stores; the paper-fasteners at any stationer's; and a soap or starch box, cut down so as to nicely fit the cells, can be got from the grocers' shop. The cells may be arranged in twenty rows of five wide, or ten of ten wide, which is the better plan. The cells should come up to about an inch from the top edge of the box, and the glass tubes project half an inch or so from the top of the cells. Having first fitted the quinine bottles into the box securely, stop one end of each glass tube with three of the gun-wads, and place a tube thus prepared inside each quinine bottle. We now have our cell complete, the quinine bottle forming the outer or main cell, and the tube being the porous, or inner cell. Next, cut the copper and zinc into strips, 2x4, as directed, with tin-smith's shears. Each piece of copper and zinc has next a strip cut along one of the long (4 inch) sides, a quarter of an inch wide, up to half an inch from the end, and this strip is bent upward and doubled upon itself over the half inch remaining uncut, thus forming a prolongation of the plate, and is intended for making the connection between the elements. *Be careful not to cut this narrow-strip completely off the plate—it must be an integral part of the metal, and* *  *and when bent up, as directed, the plates are 1½ inches wide at the bottom, with this strip, 3½ inches long, continued from one of the upper corners, making the entire length 7½ inches. The diagram illustrates the shape of the plate when finished. The copper plates must be bent into the segment of a circle so as to fit loosely in the bottle, or outer cell, and the zinc rolled up so as to easily go into the tube or porous cell. Now put a copper into each cell, where it will partially surround the tube, and a zinc into each tube. Having done this, bend the narrow strips which project upward from the cells at a right angle, about an inch and a half from their end, and this should be done accurately to insure good connection. Next coil a sufficient length of the copper wire over any flat object a quarter of an inch wide—and a corset steel is exactly the thing—and cut this flat coil of wire into pieces an inch long. These pieces of coiled wire are slipped over the ends of the copper and zinc plates (at the point indicated by the * on the diagram), and serve to bind the connection firmly and make good contact.*

Having joined the copper and zinc together by slipping them into the flat coils, push one of the paper fasteners into the binding coil, and it, acting as a wedge, makes the joint tight. Now comes an important matter as to connections. Let the cell in any selected corner be designated No. 1; the zinc of this cell is joined to the copper of cell No. 2, then the zinc of No. 2 to the copper of No. 3, and so on until the zinc of No. 99 joins the copper of No. 100, when the circuit will be complete. The zinc and copper of any individual cell must never touch each other. We have now the copper of No. 1 free, and this is fastened by a coil of wire to the side of the box, one end of the wire being coiled *flatly* on the copper strip, and the other end coiled in a *round* form and tacked fast to the box with a copper tack. Into this round coil a pin on one end of the conducting cord can be inserted when using the battery, and this is the positive pole, or anode. At the other terminal we have the zinc free, which is secured in the same manner to the box, and forms the negative pole or cathode. The current enters the battery at the anode and leaves it at the cathode when in action, and, of course, passes through anything interposed in the circuit; as, for instance, a sensitive young lady under treatment for neuralgia, or an inanimate galvanometer, if you are testing its electro-motive force. We do not, however, always want the entire battery power, and, therefore, a wire is fastened in the connection between every five or ten cells, and tacked to the side of the box, precisely as in the case of the terminals. With your conducting cord in, say the anode, or No. 1, you may peg the other into No. 15, 25, 60, 85, or any other desired selector, as these are called, according to the power needed. These selectors should be fastened to the end cell of a row, and the wire must not touch any connection other than the one intended.

Your battery will not work without solutions, and of these many different combinations are available. During the past two years I have carefully tested a large number of combinations, and measured their electro-motive power, but a few examples only will suffice.

No. 1. A saturated solution of sulphate of copper for the outer cell, and a saturated solution of sulphate of magnesia for the tube or porous cell. For the magnesian sulphate you may substitute zinc sulphate or dilute sulphuric acid, one part acid to twelve of water.

No. 2. Chloride of copper for outer cell, and chloride of ammonium, zinc, or sodium for the tube or porous cell.

No. 3. Remove the gun wads, leaving the glass tubes open, and fill with a saturated solution of sodium chloride, to which is added a drachm of aqua ammonia for each cell. This forms a single solution element, and although not so constant as the differential solution cells, for more than a few hours of continuous service, it will suffice excellently for moderate daily use, and is easily managed. After a couple of hours' rest the battery regains its full strength. Whatever solutions are used, water must be added every week, or so, to make up the evaporation. Crystallized salts also must be removed as they form on the edges of the cells. It is useless to coat the mouth of the cells with wax, stearine, etc., to obviate the running over of crystals; keep an eye on your battery, and keep it well filled and clean.

I made my last battery, as above described, two years ago. It took three hours' work, each of two afternoons, to complete it, and cost \$8.30, the quinine bottles costing nothing. As the zincs wear out, they are shifted toward the cathode, new ones being added at the anode, the point of greatest destruction. Sixty new zincs were required since, the coppers still being as good as new. The tubes must be examined frequently, to see that the wads do not come out; if they do the electro-motive force of the battery is partially or wholly destroyed beyond the break. The power is dependent on the weakest cell, as on each link of a chain. Metallic copper from the sulphate will be deposited on the porous wads after a time, and it must be carefully removed without breaking the tubes. Put in new wads when the old ones get too soft. Some of mine are yet in, after an average use of eighteen hours per week of the battery. Aside from the zincs and experiments with differential solutions, my battery has not cost me one cent for repair. This battery is available for extended experimental purposes, and can be made a source of infinite pleasure and improvement to the student of electricity.

Pliable conducting cords, armed at one end with a wire or brass peg, for insertion into the selectors (or round coils) at the side of the box, and at the other with rheophores, or instruments for properly applying the current to various parts of the body, must, of course, be procured at any electrical depot. A few appliances only are really needed, and nine-tenths of the long list of special electrodes illustrating price lists are superfluous; they are made to sell. Most electrodes can be home-made, and will serve every purpose. It is not the armament of instruments

that make the successful practitioner; it is the ability to use a few in the right way. I have more than a hundred electrodes which were purchased at meetings of the American Medical Association, and at such like times, when manufacturers pounce on physicians known or suspected to be interested in electro-therapeutics, or such as were presented by grateful patients (and there are some now and then), but in common daily practice I use, probably, half a dozen only. There are many little points in the management of electrical apparatus, and in the department of electro-therapeutics, which, being foreign to the present paper, must be deferred "to a more convenient season." Trusting the description will be clearly understood, I can assure those who possess mechanical skill enough to follow it—and a little only is needed—that they will have a battery in every way the equal, and in many respects the superior, of much more pretentious machines; one with which much good may be done by intelligent employment, and which will "put money in thy purse," a point not to be despised in this practical world.

246 North Twentieth Street.

OBSTETRICS IN THE EIGHTEENTH CENTURY.

BY M. O. LOWER, M.D.,

Of North Manchester, Indiana.

Obstetricians in the eighteenth century differed but very little from those of the present day, except in theory. Turning and the use of the forceps, crochet, etc., was about the same, with a few exceptions, as it now is. There were not so many different presentations of the fœtus recognized as there are at this time. The secretion of the uterine mucous membrane was thought then to be for the purpose of lubricating the cavity and canal of the neck, so as to prevent the sides from coalescing or growing together, and during the time of gestation these glands were supposed to secrete a mucus for the nourishment of the fœtus during the whole time of foetal life; the placenta and membranes were thought to be covered by a cribriform or cellular substance, and it adhered by contact only to the mucous membranes of the uterus, and absorbed the mucus that was secreted by the above-mentioned glands and carried it to the fœtus, for its nourishment. These glands, then, were called the *colatura lactea*. Of conception, it was thought that during the orgasm of coition the male seed was thrown into the uterus, and

thence conveyed into the cavity of the Fallopian tubes, by some absorbing or convulsive power, the fimbria at the same time grasping the ripened ovum; a few seconds only elapsing from the time of emission of the semen until impregnation of the ovum took place, i. e. if coition occurred immediately after the evacuation of the menses. It was thought that when the semen and ovum thus mingled, one of the animalculæ insinuated itself into the ovum, and joined with its belly to that ruptured part of it, from which the naval string is produced, or entering one of the vessels, is protruded to the end of the funis, by which a circulation is carried on from the embryo to the placenta and membranes. The then impregnated ovum was supposed to be endowed with a circulating force by the animalculum, by which means it found its way into the uterus. It seems as though the umbilical vein was thought to be formed before the ovum left the ovary, and in its passage through the Fallopian tube the embryo was nourished by the secretion formed therein, which was thought to be taken up by the umbilical vein and carried to the impregnated mass. The blocking up of the cervix during gestation was thought to be caused by some of the semen being mixed with the fluid secreted by the glands contained in the cervix. In the early part of gestation it was the belief that the ovum swam in a fluid which it absorbed, to increase gradually in magnitude, until it came in contact with all the inner surface of the fundus of the uterus. At that time there was no other term for a premature expulsion of the embryo or fœtus than a miscarriage, even if it happened at any time from conception to within a few days of the natural time of labor. Of moles there was but one kind known, and they were thought to be caused by the death of the embryo and its dissolution, so that at the time of its discharge nothing appeared but the secundines. The serum in which the child swims was thought to be furnished by lymphatic vessels opening into the inner surface of the amnion.

The allantois, it was the impression, contained the urine of the fœtus, but it had not yet been certainly discovered in the human fœtus; it was the opinion of most of the authors then, that the fœtus was nourished by the absorption of the nutritive fluid into the vessels of the placenta and chorion. The blood that supplies it was presumed to circulate in full stream from the arteries of the uterus to the veins of the placenta and returned by the arteries of the las: to the veins of the first, to be refined and made arterial blood in the lungs of the mother. Vomiting in preg-

nancy was thought to be servicable to the patient by unloading the stomach of superfluous nourishment, thereby carrying off, or preventing too great a turgency in the vessels of the viscera and uterus, and by creating a kind of straining or nismus in the parts, which was supposed to assist the fundus and neck of the womb in stretching. The cause of this vomiting was supposed to be from the uterus being stretched by the increase of the ovum, and causing tension of the parts, affecting the nerves of the viscus that arise from what was then called the sympathetici maximi, and communicate with the plexus at the mouth of the stomach. Of the position of the child in the uterus, it was the idea of many that its head was turned up to the fundus and its breech to the os-uteri, with the fore parts toward the mother's belly, and that it remained in that position until labor began, when the head came downward and the face turned to the back of the mother. Some alleged that the head precipitated about the end of the eighth or beginning of the ninth month, by becoming specifically heavier than the rest of the body. Others affirmed that the child increased in bulk, especially during the two last months, and the proportion of surrounding water was diminished, so that it was confined in its motion, and in struggling to alter its position the head was moved to the os-tinacum where it remained until delivery.

Smellie thought that the head was for the most part turned down to the lower part of the uterus, from conception to delivery, but he was not very strong in his opinion, as he says it is open to objections.

At the time of birth, when the placenta was delivered immediately or soon after the child, by the continuance of labor pains, or when it became necessary for the accoucheur to extract it before ligating the cord, so as to restrain too much flooding, if the child had not breathed yet, and there was the slightest pulsation in the vessels, it was the teaching to throw the placenta and as much of the navel-string as possible into a basin of warm wine or water, in order to promote the circulation between the placenta and child. Some advised to lay the placenta on the child's belly and cover it with a warm cloth; while others ordered it to be thrown upon hot ashes. When the labor was tedious and it became necessary for the obstetrician to assist nature in her efforts, the fillet was usually made use of, of which there were several kinds. The kind commonly used was made in the form of a sheath, mounted upon a piece of slender whalebone, about two feet in length, which was applied

in the following manner: If the orifice of the vagina and the os-uteri were not sufficiently open they were gradually dilated as much as possible by the hand, which was at the same time introduced and passed along the side of the head, in order to ascertain the position. This being known, the other hand introduced the double of the whalebone and fillet over the face and chin, where the best purchase was had, and where it was the least likely to slip loose its hold. After this application was effected the operator's hand was brought down, and the whalebone drawn from the sheath of the fillet, which, after the ends were tied together, was pulled during every pain, pressing at the same time with the other hand on the opposite part of the head. The forceps, too, which were then covered with leather, were sometimes used, but the fillet more frequently. Some of the authors describe the method of extracting the head when left in the uterus, by means of a net, but as it was applied with great difficulty, and they could not succeed very well with it when the head was too large or the pelvis too narrow, it was abandoned. Sometimes, when the head was too large, or the pelvis too small, and it became evident that it must be extracted by force, an instrument that was termed the "speculum matricis" was used to stretch the pelvic bones asunder and give greater capacity in the pelvic basin. If this means failed, many others were used that seem equally as absurd. When post-partum hemorrhage occurred after the birth of the child, it was treated by dipping cloths in cold, astringent fluids, and applying them over the abdomen, and venesection, and by ligatures compressing the returning veins at the hams, arms and neck; and besides this, the vagina was filled with tow, or linen rags dipped in a solution of oxyerate or red tart wine, in which a little alum was dissolved. If the patient had a natural labor, the after-treatment was then about the same as it is to-day, except small additions that have been augmented.

Curtains or No Curtains.

The Commission charged with the arrangements relating to the new Maternity Hospital in the Rue d'Assas, at Paris, are greatly exercised as to whether there should be curtains to the beds or not. Some of the most eminent French obstetricians are in favor of them, others are totally opposed to their presence. The conclusion arrived at seems to be that those physicians who like curtains will have them to their beds, and those who do not will dispense with them.

HOSPITAL REPORTS.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINICAL LECTURE, MAY 5, 1880, BY WILLIAM GOODELL, M.D.,

Professor of Clinical Gynecology in the University of Pennsylvania.

REPORTED BY WILLIAM H. MORRISON, M.D.

Enlargement of the Abdomen.

GENTLEMEN:—Here is a case of enlargement of the abdomen; I have not yet examined it, but this is the history: She is a colored woman, forty-seven years old. Has had five children, the youngest of which is twelve years old. A year ago she noticed an enlargement of the abdomen, which has rapidly increased in size. Her menses were regular up to last February, when they ceased. She has emaciated rapidly and has œdema of the legs. She measures 47½ inches around the body at the umbilicus.

Now, gentlemen, for the last few weeks I have had under my care, with a most intelligent physician, a case which I examined with the utmost care and diagnosed to be a fibro-cystic tumor, and the attendant physician's opinion inclined to mine; but the emaciation was so rapid and so great, that we thought it must be malignant. I examined the tumor carefully last week, but could not positively detect fluid; there was elasticity, but no fluctuation. I plunged in an aspirating needle, and as soon as I saw the fluid I said, "this must be ovarian." I took some of it to Dr. Formad, and he found the ovarian cells. I operated last Sunday. The difficulties of the operation were very great, and at first I thought that Dr. Formad must have made a mistake. I opened one cyst and then there was another. I opened that, and a stream of blood as large as my little finger leaked out. I had to plug the opening up and proceed as rapidly as possible to remove the tumor, which was very adherent. It proved to be a cyst of the left ovary, but as the right ovary was also diseased, I removed them both. Here the diagnosis was settled by the microscope. The woman is doing very well.

Here comes a colored woman with the statement that she noticed a tumor about a year ago. Now, here is one difficulty; ovarian tumors are extremely rare in colored women, but fibro-cystic tumors are quite common. A fibro-cystic tumor is a fibroid tumor which takes on cystic degeneration, and one or several cysts enlarge rapidly. There is no possible way of making the diagnosis from the external signs.

Mr. Spencer Wells, who has operated over one thousand times, when in this country, examined a colored woman with an enlargement of the abdomen and pronounced it to be an ovarian tumor. Dr. Washington Atlee, who had operated some three or four hundred times, was present, went up to Mr. Wells and said that it was extremely rare for an ovarian tumor to be found in a colored woman, and asked him to examine the woman again. He did so, and with Dr. Atlee's help, came to the conclusion that it was a

fibro-cystic tumor, as it afterward proved to be. I have never yet seen an ovarian tumor in a colored woman.

There is very evident fluctuation here, but you may have fluctuation with a colloid tumor, and you may tap and get no fluid. I do not think that this is colloid. This fluid may be in the peritoneal cavity, but one thing that makes me think it is not peritoneal is that it looks so like pregnancy, prominent in front. In peritoneal dropsy there is bulging at the side.

Let us examine by percussion. There is complete dullness in front; but with a peritoneal effusion of this size the intestines may be held so far back that we may have dullness in front. In the flanks the note is not quite so flat but there is no resonance on either side.

I am sure that there is fluid here, and I wish to tap her to-day. I shall show you how to tap painlessly. I take a piece of ice, put some salt on it, and press it against the skin, thus freezing the skin at the point of puncture. I shall make the puncture in the median line between the umbilicus and the pubes. I wish to have some of this fluid for microscopic examination, for if this is a fibro-cystic tumor, there will be great difficulty attending the operation, and in such cases the womb usually has to be also removed.

What was the significance of the cessation of the menses? This looks very much like ovarian disease; as though both ovaries were involved; but this does not go for much, for the woman from whom I removed both ovaries last Sunday menstruated regularly, although both ovaries were diseased.

I plunge the aspirator in, but I do not get a particle of fluid. You see here the difficulty of diagnosis. I said that I thought this was not colloid, but from its non-appearance I am disposed to think that it is colloid. There comes a little. You see how thick it is? It is colloid; in other words, like jelly. This leads me to think that this is an ovarian tumor; but Mr. Spencer Wells opened the abdomen to remove an ovarian tumor but found it to be a colloid tumor of the abdomen, arising from some tumor of the mesentery.

I shall have to perform the operation just as soon as she can submit to it. I shall have this fluid examined, and shall await with intense interest the result. If there are no ovarian cells I shall undertake the operation with misgivings.

Are there any dangers from this little operation of aspiration? There are dangers. There was a time when I tapped very frequently, but as I have grown older I have learned some lessons. The lady whom I tapped last week was seized with a severe pain in the right side after the operation, and a peritonitis set in, but under the judicious treatment of her physician it was controlled. As soon as I opened the abdomen on Sunday, out came a quantity of bloody-looking water. Examining the cavity of the abdomen, I found a number of clots which had resulted from the operation. I believe that they occurred in the following way: As soon as the tumor began to contract, from the loss of fluid, there were adhesions on the right side which broke, and from this there was oozing of blood. In operating once for a fibro-cystic tumor I tapped one of the cysts, but the hemor-

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rhage was so great that I had to plug the opening before I could go on with the operation.

If you use the trocar for tapping, the operation should always be done under the spray, but if you use the aspirator, there is very little danger of contaminating the contents of the cyst. Tapping an ovarian, or any other of these cysts, is a serious operation.

From the color of this fluid I presume that we shall have an ovarian cyst of a mottled character, looking very much like mottled jelly. These cysts usually have very thin walls. Dr. Baer will remember a case upon which we were operating in the country, in which the cyst wall was so thin that it broke, but the contents were so thick that we scooped them out with our hands, not a particle of it getting into the abdominal cavity. This cyst weighed forty five pounds. The woman recovered without a bad symptom, or, as her physician wrote to me, "without a ripple of trouble."

As I remove the needle I press the skin down over the opening and apply a piece of adhesive plaster.

I regret not being able to empty this cyst, for several reasons; first, because I am pretty sure that, small as this opening has been, the cyst being so dense and tense, a small portion of the contents has escaped into the peritoneal cavity. While perhaps it is true that the acidity of the fluid of these cysts has been overrated, yet there is no doubt that the peritoneum resents these fluids, and their presence may cause peritonitis.

Secondly, had I been able to empty this cyst, I should have been able to take a few weeks, before operating, to build up the woman's health and strength by giving her iron and quinia.

Thirdly, I should have diminished the length of my incision, and have diminished the size of the blood vessels; just as when you make a hole in a piece of rubber, the hole increases in size as you stretch the rubber, and diminishes as it contracts. Now, if I could have reduced this tumor to one-third of its present size, I should have greatly lessened the size of the incisions, and the blood vessels would have been contracted, and thus the danger of hemorrhage be diminished.

Recto-Vulval Fistula.

Here is a case, fortunately rare, because it is exceedingly hard to cure. It is one of recto-vulval fistula. Its existence has been denied by some physicians, but here is a case in point. It has annoyed her a great deal. When she came into the hospital I asked Dr. Sheppard to inject a saturated tincture of iodine into the fistula, hoping that it might reach all parts of the tract, set up adhesive inflammation and thus cure it. It has done good, but has not resulted in a cure. Now, in man, who has no vulva, you can make an incision, laying the fistula open, and allow the parts to heal from the bottom; but if in woman we should make an incision into the vulva, we should have artificial lacerated perineum, which would not heal. We must therefore try to heal this in some other way. Another way would be to cut through the parts with an elastic string, allowing the parts to heal up as it cut through.

I have now passed the sound from the vulva to

the rectum. Now comes the question as to what is to be done. The temptation is very great to make an incision, laying this open. I should like to do so, but there is danger that an opening would be left which would not heal. I had thought of using nitric acid, but on second thought I think the best plan would be to cut down as far as the sphincter and then use the elastic ligature. I find that I can get to one side of the vulva.

I fasten a string to the end of the sound and thus draw the ligature through. This fistula has been the result of a small abscess. I think that this is the first one I have ever seen in the vulva. I have seen them before in the vagina. I now cut down with the scalpel until I see the fibre of the sphincter. I had thought of nicking the skin before tying the ligature, but shall not do so, because I want the internal portion to be cut through first. As a piece of good luck, I am able to get to one side of the vulva, and we shall have more or less union resulting.

She has come a long distance to have this operation performed. Her principal reasons have been because it makes her repulsive to her husband, and she breaks wind through this opening. Otherwise, she experiences very little trouble from it. Since the injection of the iodine she has had very little discharge from it.

The existence of recto-vulval fistula is denied by some gynecologists. I do not see why it does not occur more frequently, because abscesses in this position are quite common. We have recto-vaginal fistula by no means uncommonly.

I shall have a suppository of opium (gr. j, of the aqueous extract) put into the bowel at once, to relieve the brunt of the first pain when she comes out of the ether, for the ligature will be quite painful.

What should you do when you have an abscess in the vulva or vagina? Suppose an abscess in the vulva; where should you open it and when? Open it as soon as you are satisfied that pus is present, and on the mucous surface always, because there the opening will heal up and leave but a small scar, while if it is opened at the cutaneous surface, there will always remain a marked scar. Open it freely and you need not fear hemorrhage, because you know you can always control it by means of a sponge.

One word in regard to styptics. I used to employ Monsel's solution quite frequently, but now I resort to it only when forced to do so. It is an exceedingly dirty application. It contracts all the parts with which it comes in contact. It also forms firm clots, as firm as plaster-of-Paris, which require time to break down, and when they do break down, do so with an offensive odor, and are apt to produce septicæmia. In my opinion it should be used in post-partum hemorrhage only as a last resort, after everything else has failed. If you use Monsel's solution on the vagina, you will not be able to introduce your finger after the application. Suppose you are operating for a carcinoma of the cervix and you apply Monsel's solution to control the hemorrhage, the parts will be so contracted that you cannot introduce your finger unless you give ether. Of late, I have been using vinegar as a styptic in the removal of tumors, and find it answers very well.

Result of Operation for Laceration of the Cervix.

I next show you the result of the operation for laceration of the cervix, performed two weeks ago to-day. You see there is nothing left of that red and ulcerated cervix. The operation has been wholly successful. This woman has a retroversion, which, after a while, will have to be attended to by a pessary. In the course of a few weeks these lines left by the sutures will have disappeared. This was my sixty-seventh operation for laceration of the cervix. Since then I have operated three times.

Vesico-Vaginal Fistula—Closure of the Vulva.

The next case is a very pitiable one. It is the case of a colored woman who has had a very hard labor, which left her with a vesico-vaginal fistula. She came to me and I found that there had been such destruction of tissue that it would be impossible to restore the bladder; so I attempted to close up the vulva, leaving the urethra, which was intact, and making the vagina a supplemental bladder. I succeeded only partially, and sent her to the country to recuperate her strength. The union was perfect everywhere except just under the symphysis.

It is humiliating to the surgeon to have to resort to this operation. It is an acknowledgment of defeat, and it destroys one of the woman's functions as a wife; and further, there is more or less trouble from an operation of this kind. The vagina is not intended as a receptacle for urine, and excoriations occur. We also have deposits of urinary salts and the formation of calculi, which begin to ulcerate their way through.

This operation of closing the vulva and leaving the urethra is the only one that I have attempted. In the other cases that I have operated on the urethra had disappeared. In one there was a vesico-vaginal fistula. I made a recto-vaginal fistula by means of the hot iron, and after this opening had formed I closed the vulva, making the rectum a supplemental bladder. Finally there was so great a tolerance that she could hold her water for several hours. The other was in an unfortunate girl, who, unmarried, got into the family way, and during parturition the family tried to keep it a secret and did not send for a physician in time. The result was a recto-vaginal and a vesico-vaginal fistula. In her case I closed up the vulva. She is now working in a mill down town. I saw her a short time ago and she is doing very well.

In this case I closed up the vulva and left the urethra open. The operation was not successful, because directly under the pubes there is very little tissue, and at that point the union failed. I shall not have time to operate to-day. The parts have become so thickened and hardened, from the constant trickling of the urine over them, that it will be a difficult operation.

I will get the history of the case. She is twenty-two years old, and has had one child, sixteen months ago. She was taken in labor on Sunday at 7 P.M. The child was born on Thursday at noon. Now, gentlemen, with your teachings you would not have left the case run on for that length of time. If you could not have carried the case through yourself, you would have sent for a brother physician to share the responsibility

with you. The forceps were applied on Tuesday, again on Wednesday, and the child was born on Thursday. On Tuesday the head was not in the cavity; the forceps were applied, the head brought into the cavity and allowed to remain. This was right, in one sense, but it was left too long.

I shall send the woman out, for I do not wish her to draw an inference from what I say; for when a man does as well as he can, according to his light, he should not be blamed by his conscience or by any one else. I had an uncle by marriage, who lived to be ninety years old, who never owned a pair of forceps, nor do I think he ever performed craniotomy, at least, never more than once. You can imagine how long some of his cases were in labor. He relied, as a witty Frenchman has said, on "plenty of lard and more patience."

This accident, as a rule, does not occur in a small pelvis, because in such cases the head cannot get into the cavity. This pelvis is small, but the head was drawn into the cavity by the forceps on Tuesday, and left to mould itself, which is often a very good way. It is a good plan, if after trying to deliver with the forceps, you cannot get the head down, to go away for a couple of hours and allow the head to become moulded; but here it was left too long. The physician tried again on Wednesday, and failed; he then sent for another physician. He should have sent on Tuesday, when he found that he could not deliver the head.

What would have been more proper would have been to have performed craniotomy on Tuesday; but this is an operation looked upon by every one with the utmost horror. There are some who, from a religious point of view, object to the performance of craniotomy while the child is alive. I have a medical friend in this city who will not perform craniotomy while the child is alive. From a religious standpoint he is right, but from a humanitarian standpoint he is wrong.

The forceps should, as a rule, be applied early. You are young; you put the forceps on and pull for an hour or two; you get tired out, you get demoralized, as I do to this day; you know that you are pulling a living head through living tissue, and the thought brings the sweat out on you; and then you are not pulling as you would pull a nail out of a board, bracing your feet and pulling with all your might, but you are only pulling with the strength in your arms, from your shoulder down, and, as I say, you get tired out and demoralized. Now, in this condition of affairs, I advise you to do one of two things; either take off the forceps and go away for an hour or two, then come back and try again, and, in the majority of cases, the head will be delivered easily. Failing in this, send for a brother practitioner, for if a vesico-vagina fistula occurs, there will be two to bear the blame; for these accidents, have given rise to lawsuits, and physicians have had to pay largely for a vesico-vaginal fistula, I think wrongfully; but you can always get out of the scrape by having another man with you; for it is not so easy to convict two as one.

Don't be in a hurry after you get the forceps on, but take plenty of time.

EDITORIAL DEPARTMENT.

PERISCOPE.

Glycerine in the Treatment of Flatulence, Acidity, and Pyrosis.

Drs. Sydney Ringer and William Murrell write, in the *Lancet*, for July 3, 1880:—

An old gentleman, who for many years suffered from distressing acidity, read in a daily paper that glycerine added to milk prevents it turning sour, and he reasoned thus: "If glycerine prevents milk turning sour, why should it not prevent me turning sour?" and he resolved to try the efficacy of glycerine for his acidity. The success of his experiment was complete, and whenever tormented by his old malady he cures himself by a recourse to glycerine. Indeed, he can now take articles of food from which he was previously compelled to abstain, provided always that he takes a drachm of glycerine immediately before, with, or directly after his food. He recommended this treatment to many of his friends—sufferers like himself—and one of these mentioned the above circumstances to us.

We have since largely employed glycerine, and find it not only very useful in acidity, but also in flatulence and pyrosis, and that it sometimes relieves pain. We meet with cases where flatulence, or acidity, or pyrosis is the only symptom, but more frequently these symptoms are combined. Some patients rift up huge quantities of wind without any other symptoms than depression of spirits; in others we get flatulence and acidity, one or the other predominating; and we meet with others who suffer from acidity, and also pyrosis. In all these various forms we find glycerine useful, and in the great majority of cases very useful. We do not mean to say that in all cases it is superior to other remedies for these complaints; indeed, in several instances it has only partially succeeded, where other remedies at once cured. On the other hand, in some cases glycerine speedily and completely succeeded, where the commonly used remedies for acidity and flatulence completely failed. We do not pretend to estimate its relative value to other remedies; we are only anxious to draw attention to its virtues.

Gas is in some instances formed in the stomach, in others in the large intestine, in some patients in both. Our observations were made on stomach flatulence, and as glycerine is so readily absorbed we should hardly expect that it would influence the formation of wind in the colon, except given in large doses, and when it acts as a slight laxative, and so expels the putrefying mass which forms the wind.

In some cases it removes pain and vomiting, probably, like charcoal, by preventing the formation of acrid acids, which irritate delicate and irritable stomachs.

We suggest that it acts by retarding or preventing some forms of fermentation and of putrefaction. J. Mekulics shows that glycerine prevents putrefaction of nitrogenous substances, as

of blood diluted with water, which speedily decomposes at the ordinary temperature of the air. Two per cent. of glycerine retarded decomposition for twenty-four hours; 10 per cent. for five days. If the fluid were placed in the hatching oven, then 2 per cent. retarded decomposition for several hours, 10 per cent. for forty-eight hours, and 20 per cent. altogether prevented putrefaction. He also proves that glycerine destroys bacteria and prevents the formation of septic poison, though it will dissolve and preserve the septic poison itself.

Dr. E. Murk finds that 2 to 3 per cent. will delay lactic fermentation in milk from eighteen to twenty-four hours.

Burnham Wilmot, 1860, says glycerine preserves meat so that after several months' immersion the meat is sweet and can be eaten; and Demarquay proves that both animal and vegetable substances may be kept for six weeks to two months by glycerine.

Glycerine, however, does not prevent the digestive action of pepsin and hydrochloric acid; hence, while it prevents the formation of wind and acidity, probably by checking fermentation, it in no way hinders digestion. We administer a drachm to two drachms either before, with, or immediately after food. It may be given in water, coffee, tea, or lemon and soda water. In tea and coffee it may replace sugar, a substance which greatly favors flatulence, as, indeed, does tea in many cases. In some cases a cure does not occur till the lapse of ten days or a fortnight.

Dietetic Treatment of Cancer.

Professor Beneke, of Marburg, in *Berlin Klin. Wochenschrift*, No. 2, 1880, repeats a former suggestion of his, to the effect that by dieting patients with cancer, and especially those suffering from its soft forms, with food from which the albuminates, the alkaline and the earthy phosphates are, to a great extent, excluded, much may be done to check the abnormal cell-proliferation, and prolong, if not save, the patients' lives. He assumes that cancer cells are relatively rich in cholestearin, leathin, and the above-mentioned phosphates, and the great source of these is animal food. Hence, Dr. Beneke's cancer diet allows only fifty grams (barely two ounces) of meat, weighed before cooking, *per diem*, supplemented with a little fish in the form of anchovies, *sardines à l'huile*, or fresh herrings. Butter, sugar, rice, sago, potatoes, cream, nearly all kinds of fruit and green vegetables, are allowed, but bread is given sparingly or replaced by biscuits in limited quantity, and milk is excluded. As drinks, black tea with cream, cocoa, light Moselle or Rhine wines, and occasionally champagne, are allowed. Beer, owing to its richness in alkaline phosphates, must only be sparingly taken. Professor Beneke gives a diet-table for each meal in the day, the details of which we have not space to insert. He calcu-

lates that by following his rules the normal ratio of the nitrogenous to the non-nitrogenous constituents in ordinary mixed diet—namely, 1:5—can be reduced to 1:8 or 9. The potassium salts also enter the body chiefly as vegetable combinations, and not as phosphates, and the alkalinity of the blood-serum is thereby increased so as more nearly to resemble its condition in the herbivora, in whom, Professor Beneke remarks, cancer is very rare. In answer to the possible question, "can a man exist on a diet so deficient in nitrogen and phosphates?" he quotes the *ipsissima verba* of several patients in the affirmative. One of these, an Englishman (affected, however, not with cancer, but with rheumatoid arthritis), has persevered in it for six years, with gain of weight and muscular force, as well also, according to his own statement, of mental vigor. As to the practical value of the method there is at present little to be said. Professor Beneke can muster only eight cases in which it has been tried—five by Esmarch and Oldekop, and three by himself. Two of the five were too far advanced for operation, and soon died; two others also died after several operations. The fifth—a simple cancer of the breast, which was also treated with liquor arsenicalis—was operated on without relapse. Beneke's own three cases were all alive at the last report. It would be easy to try the diet on a large scale, either at the Cancer Hospital or in the cancer wards of the Middlesex Hospital, but, as Beneke insists, it must be strictly carried out, and the theoretical principles on which it is founded must be steadily kept in view by the surgeon in charge. To those patients who require more fat than is prescribed in the diet-table, and who cannot tolerate butter, cod's oil may be given; those inclined to corpulence should take small doses of Carlsbad salts regularly during the "cure." In conclusion, Beneke points out that if, as is probable, the cancerous and the scrofulous diatheses are in many ways diametrically opposed to each other, what his dietetic system seeks is to reduce the former to the latter.

Treatment of Eclampsia.

Dr. B. F. Eager says, in a paper on the above subject, which was read before the McDowell Medical Society, at Henderson, Ky., on the 27th of May, and published in the *Indiana Medical Reporter*, for June, 1880—

When convulsions are met with in children in connection with febrile disturbance, whether of the eruptive or continued type, they are attributable to excessive elevation of temperature, or to irritation of morbid material in the blood, or possibly to a combination of these causes; in either of which conditions the elimination of heat and the irritant contained in the blood is indicated, which may be met by laxatives, diuretics and the warm and tepid bath, the last of which may be resorted to with safety in the exercise of ordinary care by a gradual reduction of temperature, which will lessen the excessive heat and encourage free diaphoresis. Take childhood with its persistent diarrhoea, when the nutrition of the brain is disturbed, and its power to preside over and direct the functions of the

various organs is diminished, when digestion and assimilation of food become imperfect, then our remedies must be directed to the checking of this rapid depletion, and to the building up of the child by the most easily assimilated tonics and stimulants, together with concentrated liquid food. To meet this tonic and astringent indication I know of no remedies better than iron sulph. and arom. sulph. acid; the latter I would give if necessary in larger doses than is usually recommended by the books. Brandy would do well as a stimulant. As soon as the persistent discharges yield to this treatment I would prefer bitter wine of iron, as it seems to me an efficient tonic peculiarly adapted to children. Cod-liver oil would be of decided advantage in this condition, and as an efficient aid to digestion I would suggest lactopeptine in full doses until the digestive organs had regained sufficient tone to dispose of such food as would best suit the child.

Another source of this trouble among children is the presence of irritants in the alimentary canal, such as food of indigestible character, an excessively acid condition of the intestinal secretions, or occasionally worms. If this irritant is confined to the stomach an emetic will promptly relieve, and unless this be accomplished it should be followed by a purgative, and should the indications be sufficiently clear I would combine anthelmintics with the latter.

Iodide of Ethyl in Asthma.

Daniel R. Brower, M.D., writes to the *Chicago Medical Journal and Examiner* for July, 1880, as follows:—

I have recently had a very satisfactory experience with this remedy in an obstinate case of asthma.

The patient is a youth about fifteen years old, who inherits instability of nervous action from both parents. He has had obstinate attacks for six years past, especially during the spring and summer months.

The only complete relief he has heretofore had has been by change of residence. He has tried about all the remedies that have been suggested, such as nitrate of amyl, chloral, morphia, bromide, belladonna and galvanism, without benefit. Partial relief was obtained for some time, by smoking a portion of the following combination, which, in some cases has acted well:—

R.	Draceni rad. pulv.,	$\frac{3}{4}$ j
	Stramonii foliæ pulv.,	$\frac{3}{4}$ j
	Lobeliæ pulv.,	$\frac{3}{4}$ vj
	Potassii nitrat. pulv.,	$\frac{3}{4}$ ss. M.

In the attack that commenced this spring this recipe seems to have been of but little service. I therefore ordered him, as recommended by Prof. Lee, of Paris, inhalation of the iodide of ethyl. The preparation used was made by Nesreck, of Darmstadt, and imported by E. H. Sargent & Co., of this city.

After several trials we found the effective dose to be six drops. This relieved the paroxysms as if by magic, and no unpleasant symptoms followed its use. The only new sensation there seems to have been experienced was occasionally a slight

sense of numbness in the feet and hands. Under its daily use the intervals between the paroxysms have grown longer, and the severity of the attacks has been relieved.

It may be well to add, that for some time past, previous to the use of the iodide of ethyl, I had been giving him iodide of potassium with tonics, but the surprising effects upon the paroxysms were clearly due to this new remedy for asthma.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—We have received a reprint from the Louisville *Medical News*, June 12th, 1880, containing an article on the "Irritable Bladder in the Female;" by L. S. Oppenheimer, M.D., of Seymour, Ind.

—"The Therapeutic Value of Iodide of Ethyl" is the title of an article by Robert M. Lawrence, M.D., of Boston, which comes to us in the form of a reprint from the New York *Medical Record*, June 19, 1880.

—*Godey's Lady's Book*, for August, besides a beautiful frontispiece, entitled "Summer," has its usual attractions in the way of the latest fashions, and also a considerable amount of interesting reading matter.

—*Lippincott's Magazine*, for August, has a number of contributions well selected for summer reading. "American Aëronauts," by Will O. Bates, and "Canoeing on the High Mississippi," by A. H. Siegfried, are, as their titles indicate, records of adventure and exploit, very agreeably written and well illustrated. "An Old English Home," by Rose Kingsley, daughter of Canon Kingsley, gives a graphic account of a famous country-seat, Bramshill House, and contains much personal anecdote, as well as some vivid bits of word painting. "Where Lightning Strikes," by George J. Varney, is full of curious facts and useful hints. An article on "The Early Days of Mormonism," by Frederick G. Mather, is based chiefly on material derived from eye-witnesses. "Dungeness, General Greene's Sea-Island Plantation," is described by Frederick A. Ober. Amelia E. Barr writes of "National Music as an Interpreter of National Character." "Adam and Eve" and "Studies in the Slums" are continued, and there are several short stories, of which "Mallston's Youngest," by M. H. Catherwood, is the most original and striking. The "Monthly Gossip" is varied and attractive, and there are poems by Edgar Fawcett and others.

BOOK NOTICES.

Half-Yearly Compendium of Medical Science. Part xxvi. July, 1880. D. G. Brinton, M.D., 115 South Seventh street. pp. 298. Price, \$2.50 per year.

The July number of the *Half-Yearly Compendium* contains articles on one hundred and thirty-nine subjects, and from one hundred and thirty-six writers, who have during the past eight months contributed important articles to periodical medical literature, both in this country and abroad. Every department of medical science is represented, some of the articles being in the words of the original, while others, especially those by foreign authors, are given in abstract. The contents of the *Compendium* are so arranged that each department is paged separately, in order that when the series is complete it may be broken up and bound in separate volumes, one of each department. The running page of the number is at the bottom of the page. The publisher offers the *Compendium* to subscribers to the *REPORTER* at \$2.00 per year, and as its field and its contents are wholly separate from that of the weekly, the combination makes one of great value to practitioners.

Transactions of the Medical Society of the State of Tennessee, at its Forty-seventh Annual Meeting, 1880. pp. 158.

The president, in his address, spoke of the progress which has been made and which is yet to be made in scientific discoveries, and suggested the possibility of the existence of a third form of life, outside of the animal and vegetable kingdoms, a kingdom of parasites and disease causes, living and preying upon the other two, but not amenable to the same laws which govern other life.

Among the papers read were: "The Use of the Obstetric Forceps," by Dr. Thomas Mendus; "Open Treatment of Amputations—Pyæmia and Septicæmia," by Dr. G. B. Thornton; "Report of a Case of Femoral Hernia," by Dr. W. T. Hope; "Hypodermic Medication," by Dr. T. J. Tyner; "Hypermetropia," by Dr. Van S. Lindsay; "Iodine as a Substitute for Quinia," by Dr. Fordyce Grinnel; "Insanity Dependent upon Physical Disease," by Dr. W. P. Jones; "A Case of General Cirrhosis," by Dr. W. J. Miller; "Traumatic Cataract," by Dr. J. G. Sinclair; "Bowel Diseases of Infantile Life," by Dr. Deering G. Roberts. The papers were brief and practical. Lists of the members and of deceased members are appended, and also the code of ethics and by-laws of the Society.

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D. G. BRINTON, M.D., EDITOR.

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SEX IN EDUCATION.

In our recent discussion of some of the medical aspects of education, we omitted to say anything of this question as it relates to the difference of the sexes. The omission has been brought to our mind, and we cheerfully devote a few words to it.

The questions which interest medical men in relation to this subject are mainly these: Are girls physically adapted to sustain the same course of study as youths? Is the co education of the sexes desirable? What limits does physiology set to the business and professional education of women?

The first of these inquiries seems to us to have received a positive reply in the affirmative by that inexpugnable authority, experience. The doubt was long raised that as much brain work as youths perform would interfere with the regularity of the menstrual function in girls; and that the sickness incident to these periods would prevent them from equal competition. The facts are not so. Either the brain work of the average

youth is never enough to hurt the average girl, or else the latter can stand more than she has hitherto had credit for; the result of large experiments, carefully conducted, prove conclusively that the girls of this country can carry out the course of study in our high schools and colleges without exposing themselves to either more sickness or greater mortality than the other sex. There are, moreover, quite as many examples of distinguished scholarship among the girls as among the boys.

There is no such unanimity on the question of the co-education of the sexes. Up to the present time the best authorities differ. Friends of the movement point to numerous institutions where the sexes are educated together with the best results. The diffidence and coarseness of the boys almost wholly disappear; the audacity and coquetry of the girls are hardly known. The sexual erethism, which in both sexes is so mightily fostered by isolation and segregation, quite disappears in the indifference produced by familiarity.

President Noah Porter, of Yale College, in his work on Education, acknowledges that considerations of health offer no decisive objections; that in some institutions the presence of both sexes appeared to be advantageous to the morals of both; that serious physical evils as well as moral ones attend the isolation of boys in schools and colleges; but that, for all that, there would be such dangers to modesty and purity in the education of both in many institutions, that in his opinion the system should be confined to very narrow limits.

We must leave the inquiry, therefore, without any positive answer, though believing that the accumulating evidence is in favor of the plan of co-education under certain not severe restrictions.

A more vital question is the fitness of woman for pursuits hitherto generally supposed to be only adapted for men. There has been a great deal of cant and selfishness expended in the arguments against her. All the talk about her smaller brain and her weaker powers belongs to

this category of cant. Most educated women one meets impress one as quite the intellectual equal of the ordinary doctor, lawyer, or preacher—often as his superior. With the same technical training as these, the woman would probably do as well or better, inasmuch as she neither drinks, smokes, chews, talks politics, races horses, nor seeks doubtful characters of the other sex—habits, one or all, that very few professional men are free from.

The physical disqualifications she is under are those of menstruation and motherhood. In regard to the former, Dr. Mary Putnam Jacobi has shown, from a large study of American women, that only a small minority are disabled from active work by their monthly sickness, and that, in the majority, it does not interfere at all with their regular pursuits of whatever nature.

Pregnancy, maternity and serious uterine diseases are positive though temporary and not universal obstacles. They must certainly debar woman from many pursuits, and prevent, at least, the regular attention to others. Those, however, who have seen the steady labor in the fields undergone by the peasant women of Europe, and that at the counter by the wives of the bourgeois of Paris and other French cities, or the heavy burdens carried by women over almost impassable roads in the mountainous districts of Norway and Sweden, the carrying power of two women being considered equal to that of one horse, certainly must acknowledge that much that has been written on this subject, in this country, is singularly futile, and either the product of ignorance or partisanship.

The proper position for a scientific mind to take, and the only way in which this question can be satisfactorily settled, is to let it be brought to the test of experience. Give women free access to all trades, vocations and professions. Put no obstacles in their way. Let them try their strength in all arenas. Where they are competent they will be competitors; where they are not, the iron law of the extinction of the unfit will operate to drive them back, without the need of any artificial obstructions.

NOTES AND COMMENTS.

Therapeutical Notes.

REMEDY FOR SICK HEADACHE.

Dr. J. E. Stinson, of Montague, Texas, recommends the following mixture in the *Peoria Medical Monthly*, for July, 1880:—

R. Tinct. opii.
Fl. ext. colocynth., aa ʒss
" valerianæ,
Spt. ether. comp., aa ʒj. M.

Sig.—Give a teaspoonful every three hours until relieved.

After the attack has passed away he places his patient on the following nerve tonic:—

R. Fl. ext. colocynth., ʒj
" nucis vom., ʒij
" cinchonæ, ʒij
Spt. frumenti, ʒiv. M.

Sig.—Teaspoonful five times daily, to be discontinued during the attacks.

COD-LIVER OIL AND IODOFORM.

According to *Progrès Méd.*, June, 19, 1880, Dr. Fonssagrives, having ascertained that the addition of iodoform and essence of anise effectually masks the repulsive taste of cod-liver oil, always employs this combination in cases where the union of iodine with cod-liver oil is indicated, iodine being conveyed into the economy in a larger proportion by means of iodoform than by any other preparation. Patients, after comparing this mode of taking cod-liver oil with the ordinary modes, unanimously declare in favor of the taste and smell of the former. To one hundred grams of the oil a quarter of a gram of iodoform and ten drops of the aniseed are added.

A Difficult Case of Stone in the Bladder.

We learn from the *British Medical Journal*, June 26, 1880, that at a recent meeting of the Imperial Medical Society of Vienna Professor Dittel related the following case. A merchant, aged 48, had for ten years suffered from disease of the bladder, and for four months had had symptoms of stone. Having ascertained the presence of a calculus, Dr. Dittel performed lithotripsy twice. A quantity of detritus, consisting of phosphate and oxalate of lime, was removed; but the principal mass of the stone resisted crushing, and Dr. Dittel suspected that it was sacculated. He directed an assistant to introduce his finger into the rectum and push the stone forward; but still he was unable to seize it. As a result of the lithotripsy, a large number of fragments of stone came away; but one remained so firmly fixed in the fossa navicularis, that urethrotomy was necessary for its removal. After four days

a similar accident occurred, and the wound had to be reopened to remove the fragment of stone. On May 2d Dr. Dittel performed lateral lithotomy. On introducing his finger into the bladder, he reached the diverticulum, but found that the stone was so closely grasped by it that, after trying for an hour, he found it quite impossible to pass his finger between the calculus and the wall of the sac. He therefore decided to perform the high operation, but was still unable to dilate the diverticulum with the finger. He then introduced a scoop between the wall of the diverticulum and the stone, and endeavored, until he became wearied, to raise the calculus from its bed; an assistant then continued the attempt, using the symphysis pubis as a fulcrum, and applying leverage with all his force until the handle of the scoop was bent. After these attempts had been carried on for an hour and a half the stone was at last broken up and removed in fragments. Considering the severe handling which the parts had undergone, the most unfavorable result was naturally expected, especially as parenchymatous hemorrhage from the wound set in some hours after the operation, rendering it necessary to plug the rectum. The patient became collapsed, and nausea, vomiting, and other symptoms of peritoneal irritation appeared. The case, however, ran a favorable course. Fourteen days after the operation the patient was free from fever, and the wounds were perfectly clean.

Erythrophleine—The New Cardiac Sedative.

The *Lancet*, July 3d, 1890, informs us, that in 1876, MM. N. Gallois and E. Hardy discovered in the *Erythrophleum guineense*, a leguminous plant, an alkaloid, erythrophleine, which they found to possess poisonous properties, and a remarkable action on the heart. The latter suggested to MM. Sée and Bochefontaine the probability that this alkaloid might be found useful in cardiac diseases. They therefore instituted a series of preliminary investigations into its physiological action, and especially into those effects which could be recorded by the graphical method. They have communicated the results to the Académie de Médecine. They examined first its effects upon frogs, and subsequently those upon rabbits and dogs. The latter series are the most important. Hypodermic injection was chiefly employed. A centigram, introduced beneath the skin of a dog, had no effect. Twice the quantity killed a large dog in two hours. They found that while one milligram per kilogram of body weight had no appreciable effect, a milligram and a half was fatal in a few hours.

The toxic power of erythrophleine appears thus to be about the same as that of Homolle's digitaline. The first sign of the toxic effect consists of restlessness, followed by a period of weakness, and this by vomiting or efforts at vomiting. The latter are the true initial symptoms of the toxic action, and if the dose of the poison is not too great, they may cease. The animal then quickly returns to its normal condition. The circulatory apparatus is affected in a manner somewhat similar to the digestive. The intra-arterial pressure is increased, the pulse becomes irregular and then retarded. The retardation is characterized by the force of each pulsation, and by the uniformity of the intra-arterial pressure, which is not modified by the respiratory movements, as it is in the normal state. This period is followed by another, in which the pulse is extremely quick and feeble. The influence of the respiratory movements on the blood-pressure reappears, the intra-arterial tension gradually lessens, the cardiac pulsations become weaker and weaker, and cease for a moment from time to time, and are at last permanently arrested. The respiratory movements seem to be directly influenced by the poison, as well as secondarily by the effect on the circulation. At first they are, as a rule, slightly slower and deeper than normal. When the heart's action is accelerated toward the end, the respirations are frequent and extremely energetic. In almost all the experiments the movements of respiration ceased at the same time as those of the heart, but in several cases the movements recommenced, and continued with energy for one or two minutes. The poison has a distinct action upon several parts of the nervous system. Thus faradization of the peripheral portions of the pneumogastric nerves in the neck does not arrest the heart of an animal under the influence of erythrophleine as it does that of a healthy animal, and faradization of the central extremities of these nerves does not accelerate the heart as it does in a healthy animal. Nevertheless, this procedure causes the same rise in pressure as under normal conditions. Immediately after death the heart is found in diastole, flaccid, but full of blood. Sometimes the ventricles present a tremulous movement similar to that which is seen after they have been faradized. Usually the heart has not lost its electrical contractility. The pneumogastric nerve retains its action on the stomach. The excitability of the phrenic nerves is, however, lessened or even lost, while that of the sciatic nerve and of the sympathetic is not diminished.

The Diagnosis of Cancer of the Stomach.

The *British Medical Journal*, July 3, 1880, states that at a recent meeting of the Paris Société de Biologie, M. Leven pointed out to the Society the great difficulties that are sometimes met with in the diagnosis of cancer of the stomach from simple dilatation. The so-called uncontrollable vomitings are present in both cases. To prevent these vomitings, M. Leven recommends that the patients should take solid food once a day (150 grams of meat), so as to avoid congestion of the mucous membrane. The rest of the alimentation consists of a litre and a half of milk and six eggs in the course of the twenty-four hours. If at the end of eight days of this regimen the vomitings be stopped, it may be taken as certain that there is no cancer of the stomach. In support of his opinions, M. Leven related the history of two patients whom he treated in this manner, and effected a cure.

Extraordinary Case of *Ascaris Lumbricoides*.

Dr. Fauconneau-Dufresne relates the following case in *l'Union Méd.*, May 1880, which, as regards the number of worms discharged, he believes to be unique: In the year 1876, a lad, twelve years of age, exhibiting some symptoms of worms, some chopped garlic boiled in milk was administered to him, and in the course of the day he passed at different times fifty *ascarides lumbricoides*. He continued to pass more and more every day, so that he evacuated as many as six hundred in the same day, the worms being enveloped in a mucus resembling white of egg in appearance, and rolled up in a ball, separating themselves after their ejection. At first they were only passed by the anus, but in a short time they were expelled also by the mouth, and in the end exclusively by the latter. During five months he did not fail to discharge worms daily, generally from three hundred to four hundred. When Dr. Fauconneau-Dufresne first saw the boy, in July, 1878, he had passed fewer for some time past, and he found him with a pale, puffed, and very emaciated face, eating much, but usually vomiting his food soon after he had taken it. Sometimes the worms were expelled with the food, but generally they were voided alone. The worms were discharged living, were five or six inches long and about as broad as a quill. Besides the garlic, he had taken some pomegranate, and now castor oil and calomel, together with occasional doses of garlic, were prescribed. This treatment produced a continuous diarrhoea; but he had a good appe-

tite, passed fewer worms, and was able to go out, and even to school. Seen again in January, 1879, when Corsican moss was prescribed. The worms were passed less frequently during this month, and in smaller numbers, and almost always dead. During February the moss was continued, with occasional purgatives, and the worms were much fewer, and dead. In March and April both dead and living worms were discharged; and at the end of the latter month santonine and calomel were prescribed. These had to be suspended from time to time, but the number of worms kept continually diminishing, and from August, 1879, to May, 1880, none whatever had appeared. The total number of worms counted during the three years, and for the most part ejected by vomiting, was 5126; many more than this having also been passed without having been counted. The greatest number recorded by M. Davaine amounted to 2500, which were passed in the course of five months.

Foreign Bodies in the Oesophagus in Children.

The *Medical Times and Gazette*, June 26, 1880, informs us that Dr. Lannelongue, in a communication to the Société de Chirurgie, stated that during the three years he has been surgeon to the Ste. Eugénie Hospital, he has extracted foreign bodies from the oesophagus eighteen times, in children from eighteen months to six and a half years of age. In thirteen instances these were pieces of money, and in most of the others the articles came from toy houses. Children to whom this accident occurs do not usually own it, for fear of being scolded, and it is only when unpleasant symptoms occur that they complain. These symptoms generally consist in difficulty of swallowing, pain, with disturbances of respiration and phonation, often of reflex origin. Some time usually elapses before the child is brought to the surgeon, who has first to assure himself whether a foreign body is really present. He explores the pharynx first by his finger, then with an olivary sound, the action of this latter against the foreign body being often unperceived in consequence of the latter becoming surrounded by mucus and fragments of food. For this reason Graefe's basket is often more useful, as it may succeed in catching the body, although no friction with this has been felt. All the pieces of money in the thirteen cases were fished up by its aid. In one of the cases a miniature flask of curaçoa could be felt by the sound, but was not extracted for fear of breaking it, and at the end of three days it was

passed per anum. Dr. Lannelongue mentions also two cases occurring in adults. In one an onion was swallowed; and having given rise to alarming suffocative symptoms, was crushed by means of a *brise-pierre*. In the other, an old woman declared she felt a pin which she had swallowed. This was simply a delusion, and Dr. Lannelongue having pretended to remove it, the delusion vanished.

Foreign Bodies in the Ear.

Mr. D. McLeod, of Hawick, N. B., states, in the *British Medical Journal*, July 10, 1880, that having lately come across a cherry stone firmly impacted in the ear, which he failed to remove with the ordinary instruments, he adopted the following method, with complete success. Having made an imitation sucker, such as boys use for lifting stones, by attaching a small piece of leather to a strong thread, he cleaned the presenting part of the cherry stone, and then applied the sucker, previously moistened with strong cement. By means of a small wire he pressed it firmly against the stone, and allowed half an hour to elapse before attempting to withdraw it. On doing so, he found a considerable pull necessary (as the stone had been in forty-eight hours); but the cement had adhered so firmly that he had no difficulty in extracting the stone.

CORRESPONDENCE.

FOREIGN.

Letter from Germany.

ED. MED. AND SURG. REPORTER:—

MUNICH, July 5th, 1880.

In the visit which I have just made to Berlin and Munich I have been impressed, as every observing visitor must be, with the remarkably active scientific life, the signs of which one sees in all directions. I might say the same with reference to artistic and economical endeavor, but I shall just now confine myself to a few of the medical topics which are now undergoing discussion.

When I was in Berlin the June meeting of the Anthropological Society took place. Among the subjects actively discussed was the development of the color sense. Your readers may have noted that last winter an ophthalmologist of note, Dr. Hugo Magnus, published a monograph undertaking to prove that this sense had greatly developed within the historic period, and is, in a sense, the product of the training that comes from civilization. He closes his pamphlet with a quotation from Tyndall, to the effect that refinement and evolution of sensory perception are brought about by intellectual culture, and that in the future new and strange realms of nature will lie opened to us by this process.

All this pretty theory was attacked and utterly annihilated by Dr. Rückhardt, in the meeting referred to. From a wide study of ancient writers, savage races and young children, it appears unquestionable that in the history, both of the race and the individual, the color sense is developed very completely and very early. It is true there is often a marked deficiency in language when it comes to defining colors; but Dr. R. ingeniously explained this by calling attention to the two facts that the sense of sight, alone of the senses, notes several impressions simultaneously, and that color is not susceptible of examination by any other sense. Hence, the difficulty of forming words which convey definite ideas of color.

The interest of the above discussion to physiologists need not be emphasized. But I pass to some more practical points. One of the most recent issues of the *Klinische Vorträge* contains a lecture by Prof. Kussmaul, on peristaltic disturbance of the stomach. This is a well known concomitant of pyloric stenosis, especially when combined with hypertrophy of the muscular coat of the stomach. But it is not this form of it to which Kussmaul calls attention; on the contrary, to one unattended by either of these conditions, and which, in fact, is a neurosis. It is not uncommon in nervous women and dyspeptic men. There is a feeling of contracting and twisting at the epigastrium, especially in the morning, often accompanied by rattling internal sounds (*clapotement*), and a taste of gall in the mouth on awakening. The peristaltic motion can be detected in thin subjects by careful palpation; sometimes they are even plainly visible to the eye.

The sensation to the patient is sometimes that of a living creature moving in the stomach, and the stories of snakes and lizards in the organ are generally attributable to the presence of these nervous tormina. The treatment by faradization, cold baths, a regulated diet, and carbonated waters, is generally successful.

A few days ago, in this city (Munich), a very flattering testimony of appreciation was offered the eminent Professor Von Nussbaum, on the occasion of the twenty-fifth anniversary of his acquiring his doctorate. The students formed a torchlight procession, the newspapers all gave a history of his brilliant career, and the brother of the King, himself a doctor, and a student of Professor Nussbaum, came to the city to congratulate him.

I naturally supposed the local medical journal would have a full account of it; but to my surprise, I was informed that there was no medical journal published here! Think of it! What a contrast to our country, where the trade of editor comes by nature to every enlightened citizen!

Of therapeutic novelties, I may refer to the benzoates of potash and magnesia, which were, last winter, so lauded by Krebs, of Prague, and other Austrian physicians. They do not seem to gain ground, and I am told have not answered expectations.

The petroleum products as vehicles are popular, and are advertised at many drug stores.

MONROVIVUS.

DOMESTIC.

The Diploma Traffic—What the State May Rightfully Do Against Medical Impositors.

ED. MED. AND SURG. REPORTER:—

In view of the evils of medical imposition, and the ease with which medical diplomas may be obtained, it should be earnestly inquired, *What ought the State to do in the premises?*

To reflect upon the people—to say that they want to be humbugged—that they must look out for themselves—will not do. If they are ignorant they should be enlightened by those having the ability to do the beneficent work.

To reflect upon legislators—to say that they are indifferent to the evils complained of—that they are in league with impostors, and deaf, alike to the groans of the wronged and the appeals of the medical profession—will not do.

If they heed not the petitions every year sent to them—if medical men and medical organizations memorialize in vain—it is because the action asked for, the bills brought forward, are not consistent with individual rights, nor adequate to the public need.

To tell legislators that a medical diploma is a *sine qua non* to the safe and successful practitioner of medicine, is to tell them what they know to be false.

Beginning with such an assumption, and going on to ask for the erection of a medical inquisition to examine the credentials of all practitioners of medicine, and to determine which will entitle the holder to treat the sick and which will not, it is no wonder that the intelligent representative of the people hesitates and refuses to vote for the measures asked for.

In various parts of the country he is acquainted with practitioners never favored with college privileges, never the recipients of medical diplomas, who are highly successful, and much esteemed by those well acquainted with the quality of their practical work; and to authorize a censorship that may condemn such men to an ignominious retirement, or subject them to an examination by their competitors for medical patronage, he will not readily consent.

When every preacher of the Gospel is silenced if unable to exhibit a diploma from a theological seminary, or unwilling to undergo an examination in theology and church polity conducted by some of his fellow-preachers; or when every lawyer is driven from the bar who holds not a diploma from a law school, or cannot pass muster before a committee of his associates—then it may seem consistent for them to support the medical censorship advocated by some members of our profession.

November 3d, 1801, the great and good Benjamin Rush, in his introductory to the class, in the University of Pennsylvania, said—

“Conferring exclusive privileges upon bodies of physicians, and forbidding men of equal talents and knowledge, under severe penalties, from practicing medicine within certain districts of cities and countries, are inquisitions, however sanctioned by ancient charters and names, serving as the bastiles of our science.”

These are noble words, breathing the spirit of freedom and of truth.

You ask, “What, then, is to be done, to check the selling of diplomas and the impositions practiced upon the people by ignorant and designing men? Can the State do nothing?”

I answer that the State can and ought to do much in this way.

In regard to schools, let it be enacted that no institution shall confer the degree, *Doctor of Medicine*, that has not a specified, necessary curriculum, a session of a specified length, and then only upon candidates coming up to a certain standard of scholarship upon examination.

No amount of legislation can ensure anything like uniformity, or equality of excellence, in teaching or learning, in medical schools.

Some will be more thorough than others. Some will excel in one department, and come short in another; so that differences must exist.

To meet this and other difficulties the State can also enact the following laws:—

1. That no practitioner of medicine or surgery, in any of its departments, shall practice his profession one week, in any place, without appearing before the County Clerk for registration.

2. That in a register provided for the purpose and kept open to all citizens for inspection, he shall record his name, with all titles or insignia of learning thereto attached, and then a statement of the place where, the time when, and the preceptor with whom, he began the study of his profession.

3. That he shall also record the name of the school or schools of science and medicine in which he was a student, mentioning the time of entering and of leaving such institutions, and what degrees, if any, he took at any one of them.

4. That he shall also record the name of every place at which he has been engaged in the practice of his profession, when he went to such a place and when he left it.

5. That to his record, thus made, he shall subscribe his name, under oath that each and every statement written is strictly true.

6. That upon complaint by any citizen that a false record has been made, the physician making it shall be arrested, and upon conviction, punished, as provided by law, for perjury.

Such laws the Legislature can enact without infringing the rights of any citizen; and they would give to every community the much needed information regarding the medical studies and experiences of those essaying to practice the healing art.

As medical schools differ in excellence, and their diplomas in value, each medical man would have all deserved credit allowed him, by reason of his record.

If he had been at the best schools, and if he had been long in practice, the facts would appear.

If he had been at the poorest, or at none at all, he would have just the measure of reputation earned—no more, no less.

If the people desired the physician who had spent the longest time in study, or been at the most celebrated seats of learning, or had the largest professional experience, they would know which to select.

With such information, provided in an authentic manner, the citizen would be able to form an

opinion, in advance of a practical trial, of the probable qualifications of a medical man. If with such light he preferred the uneducated and the inexperienced practitioner, it would be at his own risk; he alone, and not the State, would be responsible for the consequences.

I am persuaded that were we to unite in asking our Legislatures to enact such laws, they would heed our call, and provide light for the people, and so, relief from the evils of bogus diplomas and bogus doctors. J. P. DAKE, M.A., M.D.

Nashville, Tenn.

NEWS AND MISCELLANY.

The Anti-Vivisectionists in England.

The *Medical Press and Circular*, of July 7, 1880, observes:—

The Anti-Vivisectionists have had their great palaver last week. Their chief talkers were Sir Alexander Malet and Lord Haldon—whoever they may be—and Lord Shaftesbury, and the usual amount of ignorance and prejudice was displayed, with the usual determination of such folk not to hear or know anything which does not tally with their own ideas. From the groaning over the unyielding nature of doctors in general, and the unsympathetic character of the newspapers, we assume that the anti-vivisectionists are beginning to find that the endless talking of nonsense is wearisome when it produces no result. It was resolved, nevertheless, to move in the House of Commons for a return of the discoveries made by means of vivisection, to be made by those who now hold physiological licenses. Though we fully believe that such a return would be valuable to science, we scarcely see how Parliament or the public could be expected to understand it, and we are perfectly certain that it would produce no persuasive effect whatever upon what the anti-vivisectionists please to call their minds. However, if they like to have such a return, biologists are quite ready to give it, and have, in fact, already given it to the public through the columns of the medico-scientific papers, which the anti-vivisectionists might read, if they were minded to read anything.

Dr. Tanner's Fast.

On July the 27th Dr. Tanner completed his thirtieth day of fasting, and although he is gradually growing weaker, there are many who now believe he will hold out the remaining ten days. When he began fasting his weight was 167½ pounds; during the first seventeen days he lost 25 pounds, but on taking water he again gained four pounds; since which he has been gradually losing, his weight on the 27th being 130 pounds. He now frequently vomits the water he drinks, and it is doubtful if his stomach will be able to perform its function, even should he survive.

Obituary Resolutions.

At a special meeting of the Alumni Society of the Auxiliary Department of Medicine, of the University of Pennsylvania, held Friday, July 9th, the following resolution was adopted:

WHEREAS, Death having removed from our midst our esteemed friend and fellow-member, B. F. Lautenbach, M.D., PH.D., it becomes us to add our testimony to his rare social qualities and his devotion to science.

Dr. Lautenbach had, during the comparatively few years of his life, by his thorough and efficient physiological researches and experiments, as well as by his writings, emphatically shown that there was such fullness of strength in the bud that the harvest could not have been otherwise than full, rich and abundant.

Though cut down before maturity, we trust that some fruit will be found in the stimulation which must force itself upon us, urging us to labor as earnestly in the cause of science as did he.

Resolved, That we tender to the family of our deceased friend our sincere sympathies in this their sad bereavement; that we cause a copy of these resolutions to be transmitted to them, and that they be published in the MEDICAL AND SURGICAL REPORTER.

DE F. WILLARD,
A. J. PARKER,
GEO. MCCHACKEN,
Committee.

QUERIES AND REPLIES.

Dr. G. F. J., of Ohio, wishes to know how to detect the presence of lead in the urine after the administration of potassium iodide in lead poisoning.

Ans.—We believe the usual test with sulphuretted hydrogen will be the best.

Dr. L. B. T., of Ohio, asks some one to give directions for making Knapp's test for sugar with mercuric cyanide.

A Subscriber requests formula for a reliable depilatory which will effectually prevent the return of hair or whiskers on the face.

Dr. W., of Ohio.—*Batley's Sedative* is, according to the National Dispensatory, prepared as follows:—

Three ounces of extract of opium are dissolved in thirty ounces of hot water, and the solution filtered and mixed with six ounces of alcohol.

Dr. G. M. H., of Ohio, asks:—When a snake swallows an animal of considerable size, is its digestive power strong enough to digest the bones of the animal, or are they passed entire?

Dr. L. B. T., of Ohio, writes:—In this country are two or three physicians who, before the law required a diploma, took one course of lectures in a regular college and commenced practice; they have been in practice for years, but have never taken a second course and diploma. Is it allowed under the Code, for a regular physician to counsel with such?

Ans.—Yes, by all means, if they are gentlemen.

BIRTH

HUNTER.—July 22d, at Weldon, Montgomery County, Pa., the wife of John Hunter, M. B. C. M., Glasgow (lately Surgeon Cunard Line), of a daughter.

DEATH.

HUNTER.—July 22d, at Weldon, Montgomery County, Pa., the infant daughter of John Hunter, M. B. C. M., Glasgow (lately Surgeon Cunard Line).